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| PRE-APPEAL BRIEF REQUEST FOR REVIEW | | Docket Number (Optional) 050103-0554 | |
| I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on _____ Signature _____ Typed or Printed Name _____ | | Application Number 10/810,638 | Filed March 29, 2004 |
| | | First Named Inventor Jeffrey S. REITER | |
| | | Art Unit 1795 | Examiner McDonald, Rodney Glenn |
| <p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p> | | | |
| I am the <input type="checkbox"/> applicant/inventor. <input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96) <input type="checkbox"/> attorney or agent of record. Registration number _____ <input checked="" type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 <u>46,429</u> | | <div style="text-align: center;">  Signature </div> <hr/> <div style="text-align: center;"> Bernard P. Codd Typed or printed name </div> <hr/> <div style="text-align: center;"> 202-756-8000 Telephone number </div> <hr/> <div style="text-align: center;"> June 3, 2008 Date </div> | |
| NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*. | | | |
| <input checked="" type="checkbox"/> *Total of <u>1</u> forms are submitted. | | | |

Remarks for Pre-Appeal Conference

Claims 1-8, 10-14, 16, and 18-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Zejda (US 5,228,968) in view of Maeda et al. (US 5,620,523) and Ando et al. (US 6,458,253).

The Examiner asserted that Zejda substantially teaches the claimed apparatus and method. The Examiner acknowledged that Zejda does not disclose means for generating a plasma in the interior space of the chamber, an inlet portion extending exteriorly of the chamber, a pair of arcuately shaped tubular gas outlet portions, means for applying a bias potential to the gas supply means, wherein the means for applying a bias potential is electrically isolated from the means for generating a plasma. The Examiner averred that apparatus of Zejda would inherently require a power supply means to generate a plasma and that Ando et al. disclose means for generating plasma. The Examiner further maintained that Ando et al. teach an inlet portion extending exteriorly of the chamber. The Examiner relied on Maeda et al. for the teaching of arcuate gas supply means. The Examiner concluded that it would have been obvious to combine the teachings of Zejda, Maeda et al., and Ando et al. in order to allow the depositing of a uniform film with little damage.

As disclosed in the present specification, the present invention suppresses the premature ionization of inert gases (plasma formation), the erosion of the gas delivery system, and the creation of the decomposed species adjacent the gas delivery system (page 10, lines 4-26).

The combination of Zejda, Maeda et al., and Ando et al. do not suggest the claimed apparatus adapted for treating or processing at least one substrate/workpiece in a plasma and method of treating or processing at least one substrate/workpiece in a plasma.

The combination of Zejda, Maeda et al., and Ando et al. does not suggest a gas supply means for injecting gas(es) into the interior space of the chamber comprising an outlet extending into the chamber and including a pair of arcuately-shaped tubular gas outlet portions for injecting gas(es) into the interior space, and the arcuately-shaped tubular gas outlet portions are positioned between the spaced-apart pair of cathode/target assemblies, as required by claim 1; and the step of injecting gas(es) between the spaced-apart pair of cathode/target assemblies by means of an electrically isolated gas supply means having a pair of arcuately-shaped tubular gas outlet portions, as required by claim 11.

It would not have been obvious to one of ordinary skill in the art to combine Maeda et al. with Ando et al. and Zejda in the manner proposed by the Examiner. Ando et al. and Zejda are directed to sputtering apparatuses and processes, while Maeda et al. is directed to a chemical vapor deposition apparatus and method. The sputtering apparatuses and methods of Ando et al. and Zejda are very different, and they are even further different from the CVD apparatus and method of Maeda et al. It would not have been obvious to one of ordinary skill in this art to modify the Zejda apparatus into a configuration disclosed by Ando et al. and Maeda et al. Modifying the Zejda apparatus into the Ando et al. and Maeda et al. configurations, even if it was obvious to do so, and Applicant maintains it is not, would significantly alter the functionality of the Zejda apparatus. For example, in Zejda the cathodes (6, 7) face the substrate (11), while as shown in Fig. 7, the targets (13) of Ando et al. do not face the substrate and a shutter (17) is between the anode (71) with the substrate (70) and the cathode. Maeda et al., because it is directed to CVD does not have targets. It is not seen how Zejda could be combined with Ando et al. and Maeda et al. and still retain the benefits and features of Zejda. For example, if Zejda is combined with Ando et al. to provide the pair of cathode/target assemblies and

injecting a gas into the space between the pair of cathode/target assemblies, the cathode/target assemblies would directly face the substrate and the benefits of the shutter would be lost.

Further, because Maeda et al. is directed to CVD the gas introduced via the gas injectors and the gas injectors themselves, perform a completely different function than the gas and injectors in Zejda and Ando et al.

Clearly, Maeda et al. is in different field of endeavor (CVD), than Zejda, Ando et al., and the present invention (sputtering). "In order to rely on a reference as a basis for rejection of applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oeticker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). Maeda et al. is neither directed to the field of Applicants' endeavor, sputtering, nor pertinent to the problem with which Applicants were concerned, premature ionization of inert gases (plasma formation), the erosion of the gas delivery system, and the creation of the decomposed species adjacent the gas delivery system.

There is no suggestion in Zejda, Ando et al., and Maeda et al. to modify the sputtering apparatus and method of Zejda to include gas supply means for injecting gas(es) into the interior space of the chamber comprising an outlet extending into the chamber and including a pair of arcuately-shaped tubular gas outlet portions for injecting gas(es) into the interior space, and the arcuately-shaped tubular gas outlet portions are positioned between the spaced-apart pair of cathode/target assemblies, as required by claim 1; and the step of injecting gas(es) between the spaced-apart pair of cathode/target assemblies by means of an electrically isolated gas supply means having a pair of arcuately-shaped tubular gas outlet portions, as required by claim 11; nor does common sense dictate the Examiner-asserted modification. The Examiner has not provided

any evidence that there would be any obvious benefit in making the asserted modification of Zejda. *See KSR Int'l Co. v. Teleflex, Inc.*, 500 U.S. ____ (No. 04-1350, April 30, 2007) at 20.

The mere fact that references can be modified does not render the resulting combination obvious unless the prior art also suggests the desirability of the modification. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Zejda, Ando et al., and Maeda et al. do not suggest the desirability of modifying the Zejda apparatus and method, as required by claims 1 and 11.

In rejecting a claim under 35 U.S.C. § 103, the Examiner is required to discharge the initial burden by, *inter alia*, making "**clear and particular**" factual findings as to a **specific understanding** or **specific technological principle** which would have **realistically** impelled one having ordinary skill in the art to modify an applied reference to arrive at the claimed invention based upon facts, -- not generalizations. *Ruiz v. A.B. Chance Co.*, 234 F.3d 654, 57 USPQ2d 1161 (Fed. Cir. 2000); *Ecolochem Inc. v. Southern California Edison, Co.*, 227 F.3d 1361, 56 USPQ2d 1065 (Fed. Cir. 2000); *In re Kotzab, supra*; *In re Dembiczak*, 175 F.3d 994, 50 USPQ2d 1614 (Fed. Cir. 1999). That burden has not been discharged, as the Examiner has provided no factual basis for modifying the Zejda sputtering apparatus or method to include gas supply means for injecting gas(es) into the interior space of the chamber comprising an outlet extending into the chamber and including a pair of arcuately-shaped tubular gas outlet portions for injecting gas(es) into the interior space, and the arcuately-shaped tubular gas outlet portions are positioned between the spaced-apart pair of cathode/target assemblies, as required by claim 1; and the step of injecting gas(es) between the spaced-apart pair of cathode/target assemblies by means of an electrically isolated gas supply means having a pair of arcuately-shaped tubular gas outlet portions, as required by claim 11.

The only teaching of the claimed sputter deposition apparatus and method is found in Applicants' disclosure. However, the teaching or suggestion to make a claimed combination and the reasonable expectation of success must not be based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

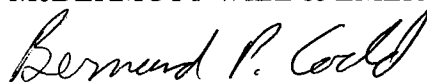
Claim 17 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Zejda et al. in view of Maeda et al. and Ando et al. and further in view of Suzuki et al. (U.S. Pat. No. 6,627,253). This rejection is traversed, and reconsideration and withdrawal thereof respectfully requested.

The combination of Suzuki et al. with Zejda, Maeda et al., and Ando et al., however, does not suggest the claimed apparatus and method because Suzuki et al. do not cure the deficiencies of Zejda, Maeda et al., and Ando et al. The dependent claims are allowable for at least the same reasons as the independent claims from which they depend and further distinguish the claimed apparatus and method.

Withdrawal of the rejections and allowance of the application are believed to be appropriate and respectfully solicited.

Respectfully submitted,

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